

STATE OF MONTANA

JOB DESCRIPTION

Montana state government is an equal opportunity employer. The State shall, upon request, provide reasonable accommodations to otherwise qualified individuals with disabilities.

Job Title: Materials Laboratory Aide

Location: Helena HQ

Department: Transportation

Division and Bureau: Engineering/Materials Bureau

Section and Unit: Physical Testing Section

Position Number: 94032

Job Overview:

This position is responsible for performing routine testing procedures on materials used in highway and bridge construction to ensure compliance with state and federal regulations, and for assisting Materials Lab Technicians with aspects of more complex testing procedures. This work involves the application of technical testing methods and procedures which vary dependent upon the type of material tested. The position will work in various sections in the Bureau as workload demands change. The position reports to the Lab Supervisor, and Lab Technician (lead worker) and does not supervise others.

The information on this job description has been designed to indicate the general nature and level of work performed by employees within this classification. It is not designed to contain or be interpreted as a comprehensive inventory of all duties and responsibilities required of all employees assigned to this job (i.e., it is not intended as a procedural manual, and employees may be required to perform some tasks not listed here).

Essential Functions (Major Duties or Responsibilities):

A. Prepare Samples for Testing

45%

Prepares samples for testing by choosing and applying procedures based on the type of material, referencing manuals, and receiving specific instructions from technicians and supervisors. Because preparation of samples can effect tests results, accuracy and conformance to procedure are paramount. Safety is also critical because high temperatures and/or chemicals may be used during preparation and testing of certain materials. The work requires the ability to gain knowledge of materials inspection and testing procedures, the properties and characteristics of a variety of materials, an understanding of national and state standards and test methods, and skill in the operation of laboratory testing equipment. Acquiring this knowledge requires the ability to comprehend written and verbal instruction as well as hands on training.

B. Performs Routine Testing

45%

Performs routine testing on a variety of materials such as Aggregates, Soils, Asphalt Binders, Asphalt Mixtures, Concrete, Cement, Steel Products, Maintenance Products, etc., and recording test data. This information is used by technicians and supervisors to calculate and create a final record of test results. The work requires close attention to detail and strict adherence to all applicable safety protocols. Analytic and computer skills are required to compile, calculate, summarize test results, compare to specifications, and log data in respective data bases.

Determines procedures to follow based on the type of material, material specifications, intended use of material, and instructions from the supervisor or higher level technicians, and following detailed procedures outlined in the Montana Materials Manual of Test Procedures.

Executes testing procedures as outlined in Montana, AASHTO, and ASTM testing methods.. The aide will not deviate from established procedures, and will seek assistance from higher level technicians on situations which are unclear.

Record test data, compile, calculate, summarize test results, compare results to specifications to determine compliance, log data in database specific to material and laboratory standard operations. Communicate results in concise, written and verbal format to supervisor as directed.

Maintains and calibrates equipment and instrumentation as directed by procedure or supervisor to ensure accurate results.

Organize and prioritize materials, equipment, and instrumentation to conduct multiple material type testing concurrently and efficiently to accomplish the priorities and testing regime directed by supervisor.

C. Clean and Inspect Testing Equipment

5%

Ensures equipment is in proper functioning order. Ability to identify and report malfunctions or damaged equipment to supervisor. The position makes necessary routine adjustments to equipment to ensure it is within specifications and accurate.

D. Other Duties as Assigned

5%

Perform a variety of other technical and administrative work in support of section activities as assigned by the supervisor.

Supervision:

This position does not supervise others.

The number of employees directly supervised is: 0

The total number of FTE managed (direct and indirect): 0

The position number for each directly supervised employee is: N/A

Physical and Environmental Demands:

Physical:

- Heavy independent lifting (up to 80 lbs.) of equipment, material samples, etc.
- Remaining seated or standing for extended periods of time, with occasional walking; standing; bending
- Work is performed in a controlled lab environment involving exposure to testing equipment, caustic chemicals (hot asphalt, lime, acids, mercury, and other chemicals), dust and fumes
- This position works with hot materials and equipment (steel molds, ovens at 350 degrees, hot plates, etc.) and solvents and chemical additives which require use of protective personal equipment such as gloves, respirators, and eye protection
- Operating a personal computer

Mental:

- This position requires training in, and close observation of safety practices and procedures
- Ability to multi-task
- Ability to meet inflexible deadlines
- Ability to work independently
- Decision making that affects both personal and public health and safety
- Computing arithmetic operations
- Comparing data
- Compiling information

Knowledge, Skills and Abilities (Behaviors):

The position requires that knowledge of materials testing procedures, state, federal, AASHTO, and ASTM standards and project specifications, the Montana Materials manual, highway construction methods and techniques, the properties and characteristics of materials (e.g., soil, concrete, aggregate, asphalt); and safety practices and procedures be acquired and applied. The work also requires skill in operating a variety of testing equipment (compression and tension machines, compactors, mixers, sieves, shakers, crushers, etc.), and the ability to accurately perform mathematical computations.

Minimum Qualifications (Education and Experience):

Education:

- | | |
|---|---|
| <input type="checkbox"/> No education required | <input type="checkbox"/> Related Associate's Degree |
| <input checked="" type="checkbox"/> High school diploma or equivalent | <input type="checkbox"/> Related Bachelor's Degree |
| <input type="checkbox"/> 1-year related college/voc training | <input type="checkbox"/> Related Master's Degree |

Experience:

- | | |
|--|--|
| <input checked="" type="checkbox"/> No prior experience required | <input type="checkbox"/> 3 years of related experience |
|--|--|

- | | |
|--|---|
| <input type="checkbox"/> 1 year of related experience | <input type="checkbox"/> 4 years of related experience |
| <input type="checkbox"/> 2 years of related experience | <input type="checkbox"/> 5 or more years related experience |

Other Specific Experience: One year experience in materials sampling and/or testing is preferred.

Alternative Qualifications:

Directly related experience may substitute for education on a year-for-year basis.

Special Requirements:

- | | |
|--|---|
| <input type="checkbox"/> Fingerprint check | <input type="checkbox"/> Background check |
| <input checked="" type="checkbox"/> Valid driver's license | <input type="checkbox"/> Other; Describe |
| Safety Responsibilities | Union Code |

The specific statements shown in each section of this description are not intended to be all inclusive. They represent typical elements and criteria considered necessary to perform the job successfully.

Signatures

My signature below indicates the statements in the job description are accurate and complete.

Immediate Supervisor	Title	Date
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Administrative Review	Title	Date
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My signature below indicates that I have read this job description.

Employee	Title	Date
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Human Resources Review

Job Code Title:	Job Code Number:	Pay Band:
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My signature below indicates that Human Resources has reviewed this job description for completeness and has made the following determinations:

- | | |
|---|---|
| <input type="checkbox"/> FLSA Exempt | <input checked="" type="checkbox"/> FLSA Non-Exempt |
| <input type="checkbox"/> Telework Available | <input type="checkbox"/> Telework Not Available |

☐ Classification Complete

☐ Organizational Chart attached

Human Resources:

Signature

Title

Date